1: DeLand O-4 (No date)1908 NQ17 Mandan NQ17

and it is protected by a narrow shed or entry from six to ten feet long. Over the smoke-holes of many of the lodges are placed frames of wicker-work, on which skins are spread to the windward in stormy weather to keep the lodges from getting smoky. Sometimes bull-boats are used for this purpose. On the site of a proposed lodge, they often dig down a foot or more, in order to find earth compact enough to form a good floor; so, in some lodges, the floors are lower than the general surfaces of the ground on which the village stands. The floor is of earth, and has in its center a circular depression, for a fire-place, about a foot deep, and three or four feet wide, with a edging of flat rocks. These dwellings, being from thirty to forty feet in diameter, from ten to fifteen feet high in the center, and from five to seven feet high at the eaves, are quite commodious."

Women Construct Them. "The labor of constructing them is performed mostly by the women; but in lifting and setting the heavier beams, the men assist. If, with the aid of steel axes obtained from the whites, the task of building such a house is no easy one at this day, how difficult it must have been a century ago, when the stone axe was their best implement, and when the larger logs had to be burned through in order that pieces of suitable length might be obtained."

Frame of Lodge. "The frame of the lodge is thus made: A number of stout posts, from ten to fifteen, according to the size of the lodge, and raising to the height of about five feet above the surface of the earth, are set about ten feet apart in a circle. On the tops of these posts, solid beams are laid, extending from one to another. Then, towards the center of the lodge, four posts are erected, of much greater diameter than the outer posts, and rising to the height of ten or more feet about the ground. These four posts stand in the corners of a square about fifteen feet, and their tops are connected with four heavy logs or beams laid horizontally. From the four center beams to the smaller external beams, long poles, or rafters, are stretched at an angle of about 30 degrees with the horizon; and from the outer beams to the earth a number of shorter poles are laid at an angle of about 45 degrees. Finally, a number of saplings or rails are laid horizontally to cover the space between the four central beams, leaving only a hole for the combined skylight and chimney. This frame

3: Will and Spinden E-5 (1905) 1906
NQ17 Mandan NQ17

Verendrye mentions their skill in making such things as painted ox-robes, deer skin, dressed buckskin, and ornamented fur and feathers, painted feathers, peltry, wrought garters, circlets for the head, and girdles. They certainly understood the art of dressing skins, though perhaps other nations equalled them. All their visitors speak of the ornamented robes for the decoration of which porcupine quills dyed various colors, or the pigments themselves, as paints, were used at first, though beads came gradually to take their places. The ornamentation consisted usually of representations of animals, and pictographic records. When leather got wet, it was beaten and rubbed with white clay which they always carried with them. This kept the robes soft. Then there were medicine bags, tobacco pouches, sheathes for knives and bows, all of skin, painted or embroidered with quills, such as are seen over the whole plains area. They had leather bridles for their horses, sometimes embroidered, and used a saddle, similar to that of the Dakotas. The horses were caught by means of long raw hide lariats which the Indians made themselves.

Whistles were also necessary articles to those belonging to the societies. Maximilian[1] describes them as "long wooden whistles at whose lower end an eagle feather on a string dangles." He says they also had large flute whistles, twenty inches long, with holes to vary the notes by application of the fingers. Besides these were the war whistles, usually made from the wing bone of some large bird. Other articles of bone, necessitated by the great use of skins, were the bone scrapers, needles and awls with which each house was profusely supplied.

Almost the only agricultural implements which they used were hoes. These were the shoulder blades of buffalo or occasionally of elk, which were cut down and to which a crooked stick was fastened as a handle.[2]

Among their cooking utensils, which were used in every hut, were spoons and ladles of bighorn and buffalo horns. Verendrye says some of these ladles held as much as three pints.

So far as the accounts go the Mandans did not make any textile fabric, though the Arikara are known to have made

[1] Op. cit., p. 416.

[2] Henry: vol. I, p. 343.

garters and belts of buffalo hair.

3: Will and Spinden E-5 (1905) 1906
NQ17 Mandan NQ17

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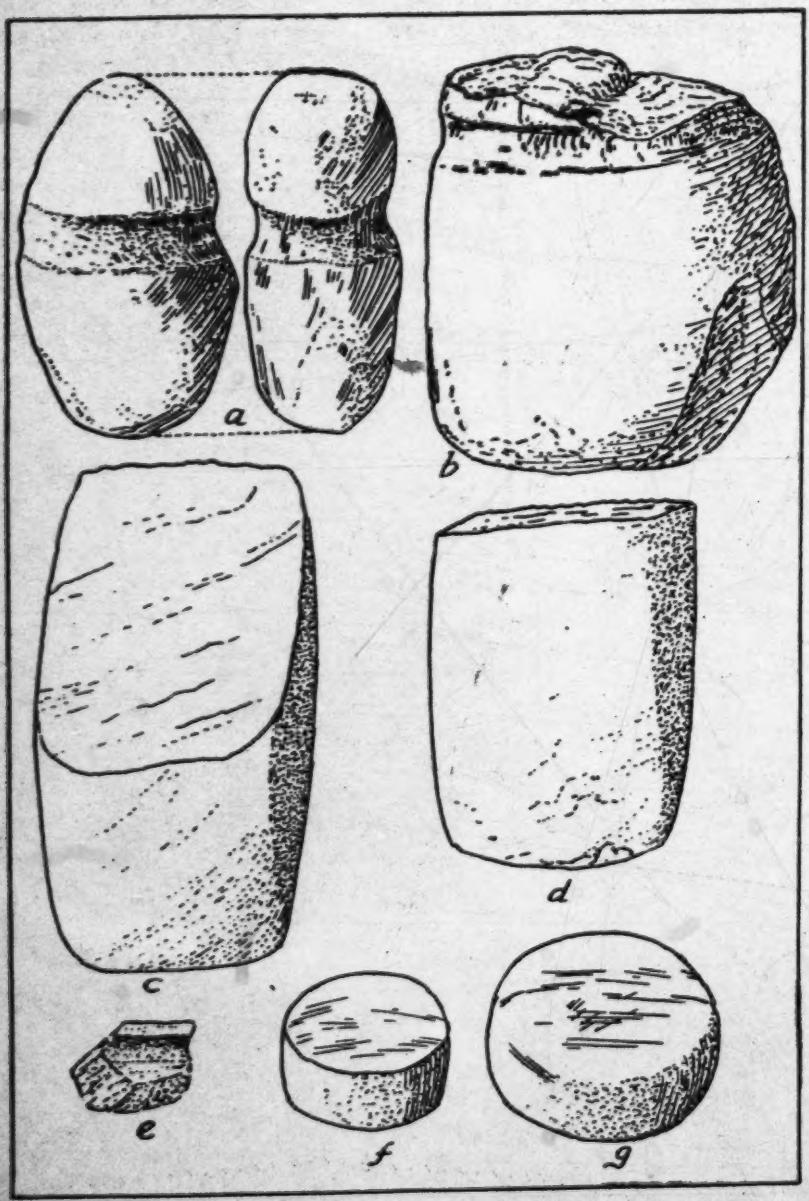

LARGE STONE OBJECTS. ¼

[Facing p. 162]

3:Will and Spinden E-5 (1905) 1906
NQ17 Mandan NQ17

struction, and two of the large depressions were partly explored and established as house sites. A number of cache pits were cleared. The size of the ditch was ascertained and work was done on all the types of remains within the ditch. The smaller type of mound was also investigated, as well as the dump heap along the bluff. The only thing which was not located was the palisade described as on the outer side of the ditch.

STONE:—Stone was used by the inhabitants of this old village as material for many articles, large and small. The larger stone objects comprised hammers, axes, celts, discoidal mullers, and large elliptical chipped blades. The smaller specimens may be classed under knives, arrowheads and spearheads, scrapers, chippers, and decorated stones of uncertain use. Some of the implements probably had other uses than those suggested by this list.

Although few large stone pieces were found, the variety was considerable. Plate XXXII, fig. *b*, represents the lower portion of a heavy granite maul. It is in a crumbly state owing to the action of fire. The groove is narrow but well marked, and is without any protruding rim or flange. The striking surface is flat and somewhat elliptical in shape, measuring four inches in its longest diameter.

Plate XXXII, fig. *a*, shows a hammer of red quartzite. This implement, made from a stream-worn stone which did not require much shaping, is divided into two nearly equal parts by a well-made pecked groove. This hammer was found in a boulder layer on hardpan at the east end of Work 2.

One crudely made grooved axe was found, the material being a hard greenstone, probably diorite. The two edges were roughly chipped into shape and the wide, shallow groove about the middle was made by grinding or pecking.

Two axes, showing much finer workmanship, are without grooves, and belong to the class known as celts. These are shown in Plate XXXII, figs. *c* and *d*. They are made of pecked and polished diorite and are bilaterally symmetrical.

Four discoidal stones were unearthed. Two of these were in perfect condition and are shown in Plate XXXII, figs. *f* and *g*, the other two were broken. These discoidal stones are of granite

3: Will and Spinden E-5 (1905) 1906
NQ17 Mandan NQ17

or quartzite, well shaped, and measuring from an inch to an inch and a half in thickness, and from an inch and a half to three inches in diameter. Most of the signs of grinding and wear are shown on the circumference. One shows discoloration on both of the faces. The use of these stones is problematical. They may have been used as mullers to grind paint, as the discoloration on one of them suggests, or they may have been used in some game. They resemble the Chungkee stone of the Southern tribes. In the Mandan game of Skohpe, stones described as "rings" were used.

The large chipped blade forms were probably put to a variety of uses. Some may have been used for lanceheads and some for spikes to be inset in war clubs. The largest of these blades is shown in Plate XXXIII, fig. *e*. It measures about six inches in length and is made of a gray chert or fine grained argillite. Shorter blades of the same material are shown in Plate XXXIII, figs. *a*, *b*, *d*, *f*. These are all roughly chipped, and do not present much of a cutting edge. Figs. *g* to *k* illustrate various forms of other large blades.

The characteristic forms of the smaller implements are shown in Plate XXXIV. The knives (Figs. *a*, *g* to *k*) show a variety of shapes. They average about three and a half inches in length and about five eights of an inch in width. Some are double pointed, and some are squared off at one end. Some are symmetrical in outline and others are not. The material commonly used is a fine grained gray quartzite, but sometimes specimens made from dark colored flints are met with. Many knives were found in the mounds and in the cache pits.

It is impossible to draw any definite line between the different classes of small implements. Thus, what are termed spearheads may have been used for knives, and vice versa. Arrowheads differ from spearheads only in size, the former seldom being over one and a half inches in length. A fine leaf-shaped spearhead is shown in Plate XXXIV, fig. *d*. It is made of brownish flint. A wide-stemmed, elliptical one of the same material is shown in Fig. *r*, while Fig. *o* shows a perforator.

Arrowheads of most of the common shapes were found, although they were not very abundant. The material used

3:Will and Spinden E-5 (1905) 1906
NQ17 Mandan NQ17

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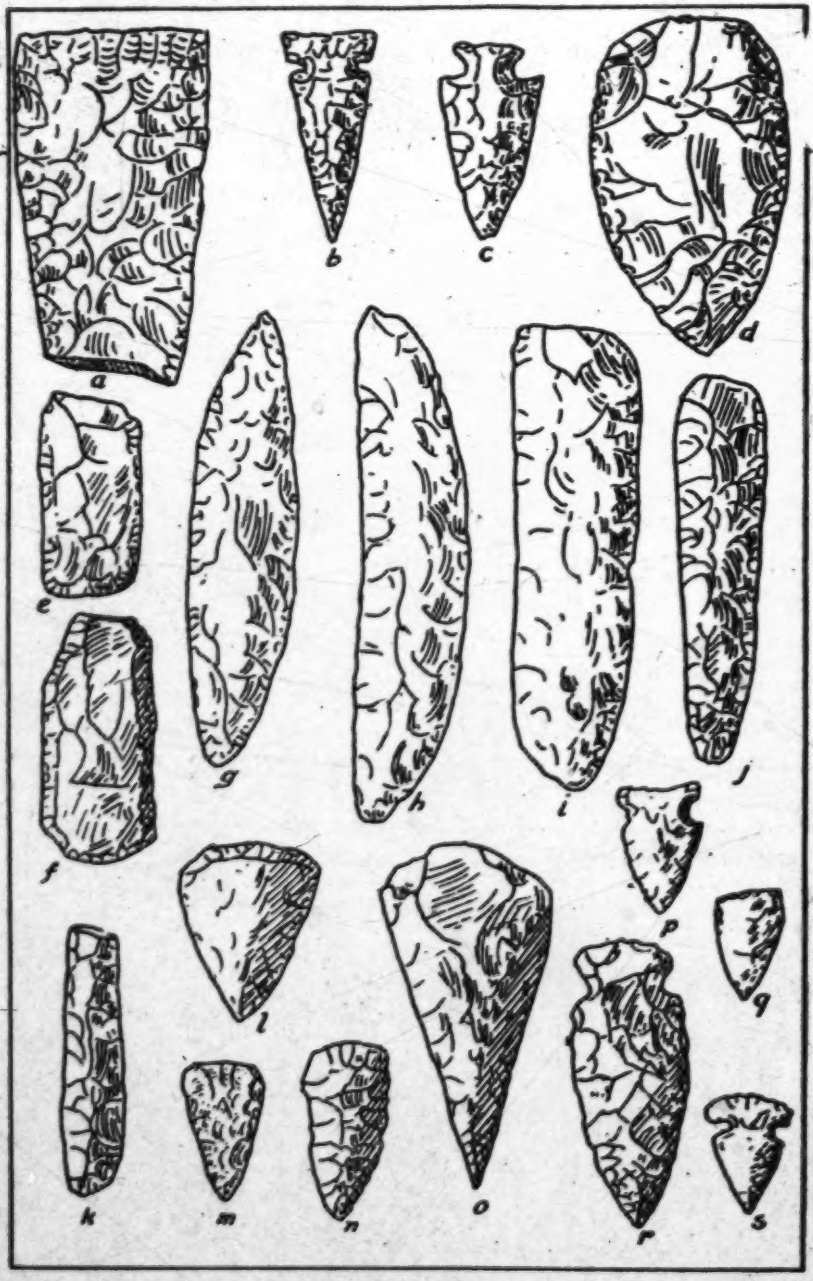

SMALL STONE OBJECTS: KNIVES, PERFORATORS, SCRAPERS, SPEARHEADS, AND ARROWHEADS. ⅓

[P. 164 (B)]

3: Will and Spinden E-5 (1905) 1906
NQ17 Mandan NQ17

for arrowheads was largely flint. A selection of the different types is shown in Plate XXXIV, figs. *b*, *c*, *m*, *n*, *p*, *q* and *s*.

Flint, chert, and quartzite scrapers were in great abundance. Some were of the "turtle back" form (Plate XXXIV, fig. *l*), flat on one side and convex on the other. Some were irregular flakes with one chipped edge (Plate XXXIII, fig. *c*). Some were roughly rectangular in shape (Plate XXXIV, figs. *e* and *f*), while others were leaf-shaped (Plate XXXIII, fig. *h*).

Flint chips were often found in layers and pockets. Near the bottom of the central cache pit in Work 5, an extensive layer of red and yellow flint chips was encountered. Double handfuls of flint and chert chips were found in various places in the mounds.

Pieces of pumice-stone were often met with in the different village sites. They were used, frequently, as whetstones to sharpen bone awls, and are sometimes deeply grooved as a result of such grinding. Other stones were also used for this purpose.

Plate XXXII, fig. *e*, shows a rasp for smoothing arrowshafts. It is made of a coarse yellow sandstone. It is very similar to rasps found among the Omaha.

Pebbles showing at the ends an abraded surface were common objects in the mounds and cache pits. These were chipping stones and were used in working flint and chert. They were of various kinds of stone, red jasper, diorite, quartzite and sandstone being noted.

Water-worn boulders, seldom over six inches in diameter, were common in all parts of the site. They were such as could be picked up on the prairie or buttes. Layers of boulders were found around the fireplaces in the two house sites explored. An extensive layer was found on hardpan in the eastern end of Work 2.

Some of these boulders gave evidence of having been broken. One showed signs of pecking. This one was oval in shape, and may have been used in shaping the bottoms of pots.

There still remains for consideration a class of ornamented stone objects of uncertain use. Three rectangular flat stones come under this head. All of these stones have diagonal cross

3: Will and Spinden E-5 (1905) 1906
NQ17 Mandan NQ17

X 172
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In excavating the house site, Work 9, a disc-shaped shell gorget (Fig. 5, *c*), perforated in the center and incised around the rim with radiating lines, was found. A smaller piece of unio shell (Fig. 5, *e*), cut in the shape of a rectangle and polished, may have been used as an ornament. Only two shell beads were found. One was made from a Unio shell and was disc-shaped and about half an inch in diameter (Fig. *b*). The second was a pierced shell of the Oliva literata (Fig. *d*), This latter shell is an Atlantic seaboard variety, found south of Cape Hatteras. It was probably brought up the Mississippi in the course of trade, being commonly found in the mounds of the Ohio and Mississippi valleys.

X 172

COPPER:—Only two pieces of copper were found, one a bead about a half inch in length, and the other an irregular piece of sheet copper with a surface of less than a square inch.

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BONE:—Bone implements were found in quantity, distributed through all the remains that were examined. The bone articles found may be grouped under two heads, utilitarian and ornamental. The first comprises hoes, edged implements, grainers, arrow-straighteners, scrapers, digging sticks, awls, needles and fish-hooks, besides other articles of uncertain use. The second group contains gorgets, beads, buckles, bracelets, and certain finely made bone objects, which may have had a ceremonial use.

Hoes, broken and entire, were often met with. For these the shoulder blade of the buffalo and elk was used, the spine being cut away and the lower edge of the blade trimmed. The socket end of the blade shows no signs of wear in any of the specimens. This may be because it was protected by the thongs which bound it to the handle.

Smaller implements, made from part of a buffalo horn, were found here and there. Most of these were polished by much use, the base of the horn being worn down to a cutting edge. Fig. 6 represents one which has acquired a high polish from use. One of these implements was found in the middle stage of manufacture; in it the horn is roughly trimmed, as with

3:Will and Spinden E-5 (1905) 1906
NQ17 Mandan NQ17

an axe, and part of the frontal bone of the skull is still attached to the base of the horn. These horn tools may have been used for scrapers, trowels, or for general purposes in the kitchen.

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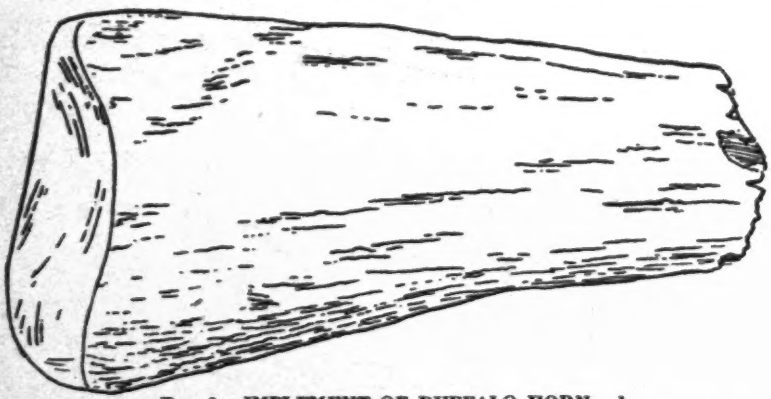

FIG. 6. IMPLEMENT OF BUFFALO HORN. ½

Several gouges or grainers were uncovered. They were made from the metapodial bones of the buffalo, and show good

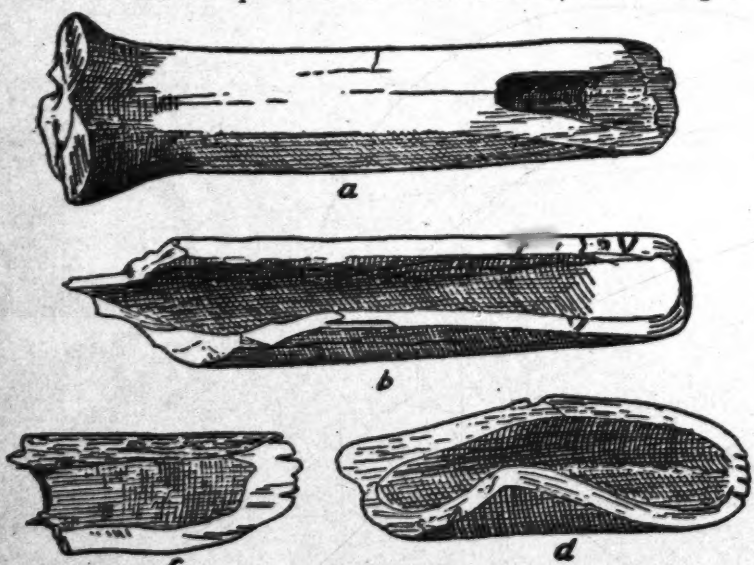

FIG. 7. GOUGES OR GRAINERS. ½

workmanship. Some of them (Fig. 7, *a* and *b*) have a smooth scraping edge, while others (Fig. 7, *c* and *d*) have a notched edge.

3: Will and Spinden E-5 (1905) 1906
NQ17 Mandan NQ17

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The socket end of Fig. 7, *a*, the only perfect specimen, was probably covered with a pad, as the bone is rough, untrimmed, and shows no signs of wear. These gouge-like tools were probably used to scrape down skins in the process of graining.

So-called "arrow-straighteners" were found in considerable numbers in the mounds. These are of buffalo rib bones through which from one to three holes have been bored. The holes are sometimes almost round, but, more usually, are elongated along the axis of the bone. The bore is doubly funnel-shaped expanding toward both surfaces of the bone (Fig. 8). The use of these objects is problematical. It seems illogical to consider them

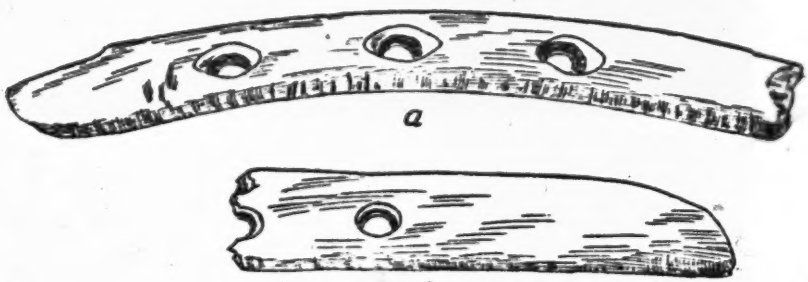

FIG. 8. ARROW-STRAIGHTENERS. ½

wrenches to straighten arrowshafts, because in this operation only one hole could be used at a time, and additional holes would only weaken the instrument. Since the holes in each piece are all the same size, they could not have been intended for arrowshafts of different sizes. However, beyond the possible use as arrow-straighteners, no use has been suggested for them.

Certain crude bone tools, worn on one or more edges, may be grouped as scrapers. Most of these are made of broken bones of the buffalo, in particular the shoulder blades and the larger leg bones. They evidently had only a temporary use.

"Digging sticks," as they have been called for want of a better name, were found in great numbers. These are made of the rib bones of the buffalo and elk, which have been worn off round at one or both ends (Plate XXXV, fig. *a*).

By far the most common of worked bone objects found, fall under the head of awls. These were found in all the exca-

3: Will and Spinden E-5 (1905) 1906
NQ17 Mandan NQ17

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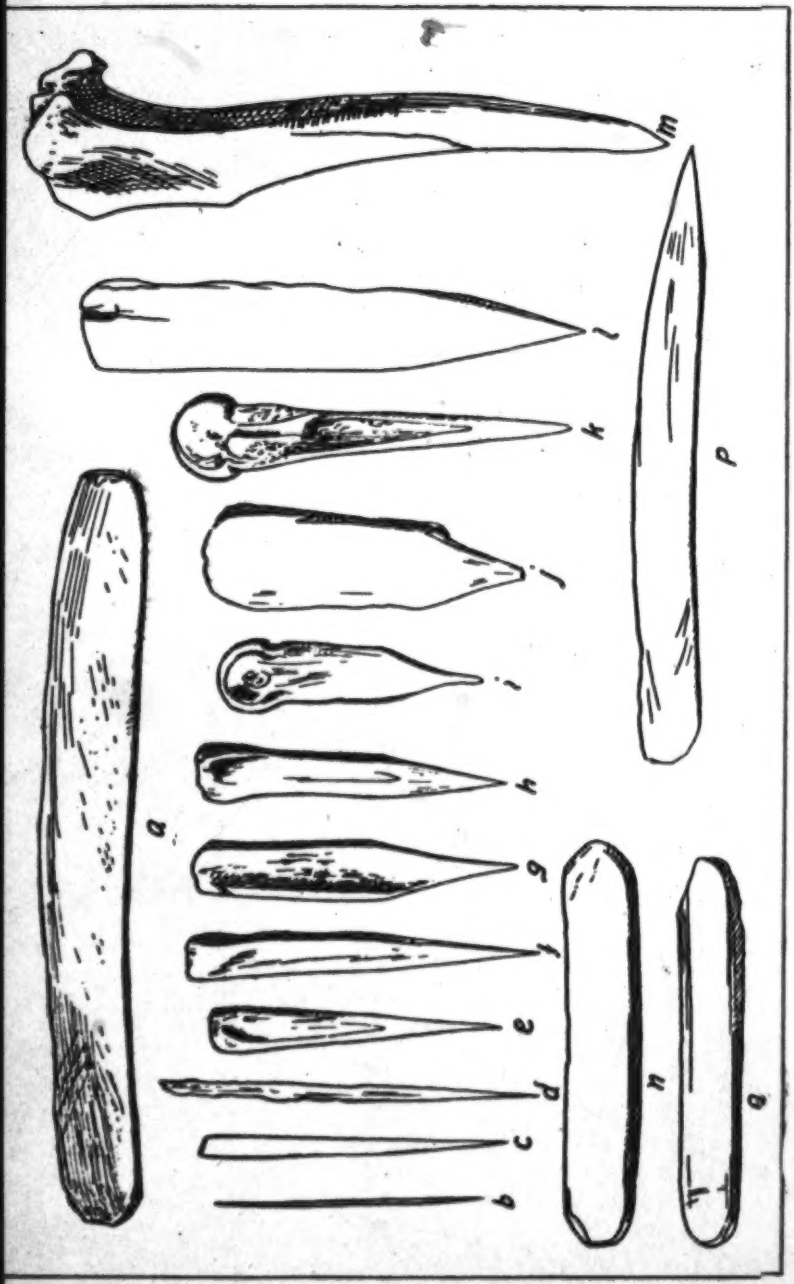

SMALL BONE IMPLEMENTS. ½

[Facing p. 170]

3:Will and Spinden E-5 (1905) 1906
NQ17 Mandan NQ17

vations and in all the village sites visited. They have a wide range in size and shape; a series of typical examples is given in Plate XXXV. The needles are represented in this plate by Figs. *b*, *c*, and *d*. The first of these is round and very sharp, the other two are flat pieces of slivered bird bone. The larger awls are made in various shapes from various bones. Figs. *e*, *f*, and *h* are of bird bones. Figs. *g*, *j*, *l*, *n*, *o* and *p* are made from rib bones of buffalo and deer. Figs. *i* and *k* are made from the metapodial bones of the deer. Besides the awls which are more or less regular in shape, many were found which were very irregular. These were evidently intended for a temporary use and were made of anything that came to hand. Fig. *m* represents one of these cruder implements. The awls were ground to a point on whet stones of pumice stone.

A paint brush similar to those used of late years was found. It is triangular in shape and is made from the interior portion of a large bone.

FIG. 9. OBJECT MADE FROM BUFFALO SHOULDER BLADE. ½

Certain objects of doubtful use are made of the shoulder blades of large animals. Fig. 9 shows such an implement. It is thin, highly polished and has one edge sharpened. They may have been used for knives and scrapers.

10: Neill H-4(no date) 1884 NQ17 Mandan NQ17

574 609 chief gave our horses in charge of a young man, and told us we need not be uneasy as there would be good care taken of them.

574 262 On going into the hut, we found buffalo hides spread on the ground, before the fire, for us to sit upon, and soon after we were presented with two large dishes of boiled corn and beans, after which they gave us another large dish of boiled dried meat, but very few of us could eat of it, as it had too strong a taste and smell.[1]

231 342 After some other details which we omit, Harvey writes that when night came: "One young man brought in our horses, and put them in the same hut along with us, upon the right hand, on entering, and ourselves upon the left; a space was enclosed with a railing to keep them within bounds. This custom causes their habitations to have a very disagreeable and offensive smell. This precaution of theirs is to keep the horses from being stolen by the Assiniboines, or other enemies, who are frequently lurking about the village.

515 291 "Towards evening, having gone down to the river side, I observed the custom of washing themselves in the Missouri. Both men and women make it a rule, every morning and evening, to go down to the river, and wash for some time; the men make use of the clay to wash their hair, which answers the purpose of soap to take out the white and red earth with which they daub it, after having washed. Modesty in the female sex appears to be a virtue they are unacquainted with. They wear a kind of leather shift which reaches down to the calves of their legs. This they slip off some distance from the shore, and walk very deliberately into the water entirely naked, in the presence of old and young who seem not to pay any attention to them. * * * * * The men make use of no other covering, in the summer season, than these buffalo robes, and even these are seldom worn within doors, and only thrown on when they go out to visit or walk about the village. [352] Both sexes sleep naked. Their beds are raised about two feet from the ground, and hung around with dressed skins. In summer they seldom use any coverings at night, but lay like so many brutes."[2] * * * * * Mr. Henry gives a description of their lascivious dances which is too indelicate to publish. He writes under date of:

252 262 352 512 412 "Sunday, July 20th. At daybreak we were all up, and I took a walk down to the river, where I observed the same ceremony of washing as last evening, with as little reserve as before. Our host on our return presented us with some dried meat, and soon after a dish of corn and beans, but as it is not seasoned with any kind of grease or fat, after the first meal it has a very insipid taste. The corn is generally pounded or bruised in a wooden mortar, which is fixed fast and firm in the ground, in one corner of the hut, and this is the first work performed by the women in the morning.

[1] [Category 116, p. 325.-A] [2] [Category 116, p. 326.-A]

10: Neill H4(no date) 1884 NQ17 Mandan NQ17

formed by the women in the morning.[1] Their sweet corn and beans are boiled whole; they make use of large earthen pots of their own manufacture, made of black clay, of which they have plenty near their villages. They make them of different sizes, from five gallons to a quart. In these vessels is never anything of a greasy nature.[1] * * * * * * The bottoms of the pots are of an oblong shape; it therefore requires much care to keep them from upsetting, for which purpose when they are put to the fire a hole is made in the ashes to secure and prop them erect, and when taken away they are placed upon a sort of mat made of the fibers of the bois blanc; these coils or rugs are made of different sizes, according to the dimensions of the several pots, which keeps them firm and secure. Some of these pots are provided with two cones, or handles.[1] * *

Baptiste La France made his appearance here. This man had left the Prairie la Souris [Mouse River] with a small assortment of goods for the purpose of trading, equipped by the Hudson Bay Company. He now resides upon the south side of the river, at the great Mandane village,* and hearing of the arrival of white people, he came over to us. He now informed the chief, Black Cat, who his guests were and the cause of our visit, which was mere curiosity. [The chief] instantly retired to his family hut and brought out his flag, which was given him in 1804–5; they alsogave him a silver medal, and the same articles were also given to the principal chief of each of the other villages, also several very useful utensils were left amongst them.† I saw the remains of an excellent large corn mill, which the foolish fellows had demolished on purpose to barb their arrows; the largest piece of it which they could not break nor work up into any weapon they have now fixed to a wooden handle, and make use of it to pound marrow bones, to make grease."

We were now desirous of crossing the river, therefore sent off La France to engage people of the opposite village to come over for us.[2] * * * * * * * We were now informed that eight canoes were in waiting for us, from the opposite side, and the same number of young men had come over to assist in crossing our horses.[2] * * * * On our going over to the war side we found the chief of the Great Mandan village, Le Gros Blanc. He was waiting with his own canoe to ferry over Mr. Chaboillez and me. He appeared very

†To each chief, Lewis and Clarke presented a medal, a flag, and a uniform coat. In the narrative of the expedition is the following sentence: "A variety of other presents were distributed, but none seemed to give them more satisfaction than the iron corn mill, which we gave to the Mandans."

†The Mandans, about 1760, were settled on the banks of the Missouri, eighty miles below, seven villages on the west and two on the east side of the river. The two villages were reduced by small-pox, and moved up the river and settled a village near the Receivers, and afterwards the people of the other village joined them. In 1796 they were in two villages at the points where Henry found them, on opposite sides of Missouri, about three miles apart.

[1] [Category 116, p. 328.-A.] [2] [Category 116, p. 329.-A]

10: Neill 11-4(no date) 1884 NQ17 Mandan NQ17

and treasures, as it contains every thing he values most, viz: two bulls' heads, which seem to be their great Manitou and protection. They are well daubed over with earth, and particular care is taken of them. There is laid on, or rather hung up, his arms, shield, ammunition, scalps of his enemies, and every thing he most values. 353

MORTAR AND PESTLE.

Next to this stage, stand the mortar and pestle, fixed firm in the ground, and the remainder of the hut from that to the door is vacant during the daytime, but occupied during the night by the horses. Then there still remains a large space in the center, around the fire, for the use of the family, which is generally swept clean once a day. 342 412 231

CORN STAGE.

Fronting the entrance of each porch stands a stage raised about eight feet from the ground, twenty feet in length, and ten feet in breadth, for the purpose of hanging up their corn to dry, in the fall; these stages have a tolerable good flooring, which in the fall is covered with beans to dry, and posts are erected upon them, on the tops of which are laid poles or rafters, to which the corn and sliced squashes are suspended in tresses to dry. When their harvest is over, they must have a pretty effect, but at this season of the year they are lumbered up with different kinds of drift-wood, of which they make their fires, and it gives a very ugly appearance to the villages. 343 251 313 372

DRIFT WOOD.

This wood they collect, in the spring, when the ice breaks up, and when great quantities of this wood floats down, the natives being expert swimmers, and so very active, that there is scarcely a large tree escapes them, until they have a sufficient stock for the year. I observed lying opposite to each village, an immense pile of this wood, and some trees of an amazing size. Commonly, when they collect the drift wood there come down numbers of drowned buffalo, that have perished in attempting to cross above, at a season when the ice was bad. These animals the natives are very careful to haul on shore, as they prefer the flesh in that state. [222] [262]

LIGHT HAIRED CHILDREN.

An extraordinory sight that struck me among these people, was to see several children, of about ten years of age, whose hair was perfectly gray, and bore a strong resemblance to aged persons. Those I saw were all girls. These people in general have not that strong coarse hair, so peculiar to the natives of North America; it is of a much finer nature, rather inclining to 142

[See Category 16, p. 382.-N.]

437 willing and ready to serve you as long as you have any property.
177 But when all is expended you may shift for yourself, as they will pretend they do not understand you any longer. Besides paying our host [343] beforehand, I promised him a tobacco-pipe on my departure, if I were then pleased with his conduct during our stay. His pay consisted of the following articles: 60 balls and powder, 4 large knives, 2 small knives, 1 fathom tobacco, 1 dozen rings, 1 dozen hawk-bills, 6 flints, 3 worms, 3 awls, and 1/4 pound blue beads.

164 [343] The natives at present are mostly affected with a bad cough, which daily takes some of them off. Aged and infirm persons, and young children, are the common victims to this disease. It is a kind of whooping-cough, which has appeared all along the Red and Assiniboine rivers, on the Saskatchewan even to Fort des Prairies, and in several other parts of the North West, carrying off many people

241 July 21st. I set off early on horseback with part of my people
[462 for the upper villages. We passed extensive fields of corn, beans,
561] squashes, and sunflowers. Many women and children were already
●412 employed in clearing and hoeing their plantations. Their hoes are the shoulderblade of a buffalo, to which is fastened a crooked stick for a handle; the soil not being stony, this slight implement answers every purpose. The road first led over two hills, after which we came to a smooth and pleasant plain for about two miles to the Saulteur (Soulier) [Amahami—Analyst] village, of about 40 huts.

361 [362]. . These villages are surrounded by a kind of stockade, princi-
417 pally made of driftwood, which has a miserable appearance and is daily falling to pieces; but I am told that upon any emergency it can be put into a tolerably good state of defense at very short notice, as every man, woman, and child lends a hand.

526 We witnessed a diversion which takes place almost every day
481 between the Mandanes and Saulteurs (Souliers). It is the exercise
702 of running long foot races, in order to be prepared for the emergency of being dismounted and obliged to fly from their enemies at war. They assemble upon a beautiful green near the village, where, having remained some time, calling out to their comrades to come and run, they set off in a file on a slow trot, entirely naked, taking the road that leads up the hills to the S., about a mile from the village. Passing near those rising grounds, they disappear, and are not seen till they reappear from the S.E., down a steep hill and over a level plain, to the spot whence they started. Here they do not stop, but rush on to the Missourie, and plunge in headlong, all